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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,060	06/15/2006	Josef Artelsmair	ARTELSMAIR-7 PCT	6099
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COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER DANG, KET D	
			ART UNIT 4118	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,060	Applicant(s) ARTELSMAIR, JOSEF	
	Examiner KET DANG	Art Unit 4118	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/15/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/AT/2004/00439 filed on 14 December 2004.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim 17 is objected to because of the following informalities: In claim 17, "a welding precess" is misspelled. Examiner interprets the phrase as "a welding process". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. In claim 1, the recitation of "...**optionally** a wire feeder unit (30) are arranged in the welding apparatus (1)" at lines 5-6 renders the claim indefinite because it made the claimed scope uncertain. It is unclear whether the wire feeder unit is a part of the recited welding apparatus. The recited "separate welding processes" at line 8 also

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renders the claim indefinite. What are they? Such processes must be clearly defined (thought, this is intended use). It is unclear whether "a welding process" and "a cold-metal transfer welding process" later recited at lines 10-12 are such separate welding processes. It appears that claim 1 intended to be an article or apparatus claim but not both article and process which would be considered as a hybrid claim that could violate the 35 USC 101.

7. In claim 5, the recitation of the phrase "likewise designed" at line 3 renders the claim indefinite because "likewise" is not a positive recitation. It is suggested to have "likewise" to be deleted. Furthermore, it is unclear whether "a cold-metal transfer welding process" recited at lines 3-4 the same as the one recited in the preceding claim 1. If it is so, then "a" should be changed to "said". If this is not, then essential structural cooperative relationships between the two are needed, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

8. In claim 7, there is insufficient antecedent basis for "the welding direction" recited at line 4 in the claim or from the preceding claim 1. Such direction must be clearly defined.

9. In claim 9, there is insufficient antecedent basis for "the respective active welding torch" recited at lines 5-6 in the claim or from the preceding claim 1. It is suggested to replace "the respective active welding torch" with "one of two separate welding torches (10, 35)".

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10. Regarding claim 11, the phrase ",i.e., in the welding direction" (recited at lines 5-6) renders the claim indefinite because it is unclear whether the limitation(s) following the "i.e.," are part of the claimed invention. See MPEP § 2173.05(d). There is insufficient antecedent basis for "the longitudinal direction of the weld" recited at line 5 in the claim or from the preceding claim 1 since "the weld" or "the welding direction" is undefined.

11. In claims 12 and 13, there is insufficient antecedent basis for "the welding wires (13, 32) (recited at line 3) from the preceding claim 1. It is unclear that there is only one welding wire (32) recited in the preceding claim 1.

12. Claim 14 is combined at least two welding processes, however, the claim appears to be incomplete for omitting essential steps defining such processes, such omission amounting to a gap between the steps or processes. See MPEP § 2172.01. The claim fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. Since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

13. In claim 20, "the other welding process (es)" renders the claim indefinite per se because such "other" or "process" or "processes" are undefined.

Claim Rejections - 35 USC § 101

14. Claims 14-22 are rejected under 35 U.S.C. 101 because the claimed recitation of processes, without setting forth any steps involved in such processes, results in an improper definition of a process, i.e., results in a claim which is not a proper process

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claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

15. Furthermore, In addition to claims 21 and 22, the claim provides for the use of consumable welding wires or welding wires, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1, 5-14, 18, & 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditschun et al. (US 4,806,735) in view of Forrest et al. (Pub No. US 2002/0148113 A1).

18. Regarding claims 1, 5-14, 18, & 20-22, Ditschun et al. disclose a welding apparatus with a welding torch unit (See figure 1) connectable thereto via a hose pack; wherein at least one control device 52M (Fig. 6); a welding current source 24 (Fig. 1) and optionally a wire feeder unit 20 (Fig. 1) are arranged in the welding apparatus (Abstract); wherein the welding torch unit (See figure 1) is formed by at least two separate welding torches 10/12 (Fig. 1) intended to carry out at least two independent,

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separate welding processes (Col. 6, lines 30-42); wherein the first welding torch 10 (Fig.1) is configured to carry out a welding process and at least a second welding torch 12 (Fig. 1) is configured to carry out a welding process; a device (Col. 6, lines 30-32) for synchronizing the welding processes carried out by the at least two welding torches (Col. 3, lines 66 – Col. 4, lines 12) is provided; wherein the first welding torch 10 (Fig.1) precedes the second welding torch 12 (Fig. 1) in the welding direction (Col. 2, lines 6-12); wherein two separately controllable current sources 24/28 (Fig. 1) are arranged in the welding apparatus to supply the welding torch unit (See figure 1) with energy; wherein only one current source 24 (Fig. 1) is arranged in the welding apparatus to supply the welding torch unit (See figure 1) with energy, which current source is alternately connected with the respectively active welding torch 10/12 (Fig.1) (Col. 2, lines 32-37); wherein the at least two welding torches 10/12 (Fig.1) of the welding torch unit (See figure 1) are laterally offset relative to one another in the longitudinal direction of the weld, i.e., in the welding direction (Col. 2 lines 6-10); wherein the welding wires 16/18 (Fig. 1) of the at least two welding torches 10/12 (Fig.1) have different diameters (Col. 3, lines 3-7); wherein a consumable welding wire 16 (Fig.1) is moved forward and backward, and that at least two welding processes are synchronized in time (Col. 3, lines 66 – Col.4, lines 12); wherein at least two welding processes 24/28 (Fig. 1) using consumable welding wires 16/18 (Fig. 1) are temporally synchronized in a manner that the droplet detachments from the welding wires of the at least two welding processes take place simultaneously (Col. 3, lines 66 – Col. 4, lines 12); and wherein at least two welding processes 24/28 (Fig. 1) using melting

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welding wires 16/18 (Fig. 1) are temporally synchronized in a manner that the droplet detachment from the welding wire of one welding process takes place in a manner temporally offset relative to the droplet detachment of the other welding process(es) (Col. 3, lines 66 – Col. 4, lines 12).

19. Ditschun et al. (US 4,806,735) fails to disclose a welding torch is configured to carry out a cold-metal transfer welding process with a forward-backward movement of a welding wire.

20. However, Forrest et al. teach a cold-metal transfer welding process (Abstract) with a forward-backward movement of a welding wire (Page 2, paragraph 34, lines 1-6); wherein the first welding torch is likewise designed to carry out a cold-metal transfer welding process (Abstract); wherein the welding wires of the at least two welding torches are comprised of different materials (Page 2, paragraph 31, lines 1-6); Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Ditschun's reference, to include a cold-metal transfer welding, as suggested and taught by Forrest, for the purpose of providing: (1) a cold-welding metal over the die to portion of a thin metal film over the substrate (Page 1, paragraph 12, lines 105) and (2) a cost-effective because the dies are reusable (Page 7, paragraph 95, lines 3-10).

21. Claims 2 & 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditschun et al. (US 4,806,735) and Forrest et al. (Pub No. US 2002/0148113 A1) in view of Brunner et al. (US 6,570,132 B1).

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22. Regarding claims 2 & 15-16, Ditschun & Forrest disclose the claimed invention as set forth above, except for wherein the first welding torch is comprised of a WIG/MAG welding torch; wherein a welding process is comprised of a MIG/MAG welding process; and wherein a welding process is comprised of a WIG welding process. However, Brunner et al. wherein the first welding torch is comprised of a WIG/MAG welding torch (Col. 3, lines 16-18); wherein a welding process is comprised of a MIG/MAG welding process (Col. 3, lines 15-18); and wherein a welding process is comprised of a WIG welding process (Col. 3, lines 16-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Ditschun & Forrest's references, to include a WIG/MAG welding torch, a MIG/MAG welding process, and WIG welding process, as suggested and taught by Brunner, for the purpose of performing different varieties of welding torch and processes (Col. 3, lines 16-18).

23. Claims 3-4, 10, 17, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditschun et al. (US 4,806,735) and Forrest et al. (Pub No. US 2002/0148113 A1) in view of Trube et al. (US 6,469,277 B1).

24. Regarding claims 3-4, 10, 17, & 19, Ditschun & Forrest disclose the claimed invention, **except for** a laser unit; wherein the first welding torch is comprised of a WIG welding torch; wherein the first welding torch is comprised of a plasma burner; wherein the at least two welding torches comprise a common gas nozzle; that wherein a welding process is comprised of a plasma welding process; and wherein a welding

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process is comprised of a laser welding process. **However**, Trube et al. teach a laser unit (Abstract and see one drawing); wherein the first welding torch is comprised of a WIG welding torch (Col. 1, lines 48-53); wherein the first welding torch is comprised of a plasma burner (Col. 1, lines 48-53); wherein the at least two welding torches comprise a common gas nozzle (Col. 2, lines 55-58); that wherein a welding process is comprised of a plasma welding process (Col.1, lines 48-53); and wherein a welding process is comprised of a laser welding process (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Ditschun & Forrest's references, to include a laser unit, a WIG welding torch, a plasma burner and its process, as suggested and taught by Trube, for the purpose of joining different welding processes to improve welding quality (Col. 2, lines 35-40).

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ujiie (US 3,746,833) discloses process and apparatus for triple-electrode MIG welding using short-circuit and spray-arc deposition. Lund et al. (US 4,088,866) disclose method and an apparatus for automatic electric welding. And Backstrom et al. (US 4,143,260) disclose multi electrode torch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET DANG whose telephone number is (571)270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K.D./

Examiner Art Unit 4118

/TU B HOANG/

Supervisory Patent Examiner, Art Unit 3742